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09/629,831	07/31/2000	Jeffrey Thomas Kreulen	AM9-99-0157	4998

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EXAMINER

SMITH, PETER J

ART UNIT	PAPER NUMBER
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2176

DATE MAILED: 06/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/629,831

Applicant(s)

KREULEN ET AL.

Examiner

Peter J Smith

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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### DETAILED ACTION

1. This action is responsive to communications: application filed on 09/07/2000.
2. Claims 1-17 are pending in the case. Claims 1, 6, and 11 are independent claims.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1, 6 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kostoff et al. (hereafter referred to as Kostoff), US 5,440,481 patented 08/08/1995.**

**Regarding independent claim 1**, Kostoff teaches determining a frequency of each word in each document in fig. 2, table 1, col. 4 lines 50-68, and col. 6 line 65 – col. 7 line 11. Kostoff teaches creating a table of most frequently occurring words in the documents in fig. 2, table 1, col. 4 lines 50-68, and col. 6 line 65 – col. 7 line 11. Kostoff teaches determining a frequency of phrases in each document that could contain only words in a table in fig. 2, table 1, col. 4 lines 50-68, and col. 6 line 65 – col. 7 line 11. Kostoff teaches outputting the most frequently occurring words and most frequently occurring phrases as a dictionary in fig. 2 and col. 4 lines 64-68.

Kostoff does not specifically teach inputting a maximum dictionary size and limiting the dictionary to the inputted maximum dictionary size. However, Kostoff does acknowledge the importance and limitation of memory size for storing a list of trivial words in col. 4 lines 44-45.

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This list is different than the dictionary itself, however it teaches one of ordinary skill in the art at the time of the invention the relevance of memory storage size. Kostoff also teaches selecting a portion of the word and phrase dictionary in col. 5 line 59 – col. 6 line 64. Kostoff uses an example of selecting the 60 most often repeated phrases. Kostoff notes that more or less than 60 most often repeated phrases may be selected at the discretion of the user.

In light of these teachings of Kostoff, one of ordinary skill in the art at the time of the invention would have truncated the dictionary of Kostoff at the user inputted number of most often repeated phrases in the event the dictionary had to reside within a limited memory storage. The teaching of Kostoff of possible memory storage constraints having an impact on a list size in col. 4 lines 44-45 would have motivated the person of ordinary skill in the art at the time of the invention to have made this modification. It would have been obvious to one of ordinary skill in the art at the time of the invention to have discarded the less frequent terms below the population threshold inputted by the user because they would not have been of further use in determining the themes of the text to prepare it for clustering with other documents. Only the top set of words and phrases determined by the user would have been used and therefore it would have been obvious to have only retained those words and phrases in the dictionary.

**Regarding independent claim 6**, Kostoff teaches determining a frequency of each word in each document in fig. 2, table 1, col. 4 lines 50-68, and col. 6 line 65 – col. 7 line 11. Kostoff teaches creating a table of most frequently occurring words in the documents in fig. 2, table 1, col. 4 lines 50-68, and col. 6 line 65 – col. 7 line 11. Kostoff teaches determining a frequency of phrases in each document that could contain only words in a table in fig. 2, table 1, col. 4 lines 50-68, and col. 6 line 65 – col. 7 line 11. Kostoff teaches outputting the most frequently

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occurring words and most frequently occurring phrases as a dictionary in fig. 2 and col. 4 lines 64-68.

Kostoff does not specifically teach inputting a maximum dictionary size and limiting the dictionary to the inputted maximum dictionary size. However, Kostoff does acknowledge the importance and limitation of memory size for storing a list of trivial words in col. 4 lines 44-45. This list is different than the dictionary itself, however it teaches one of ordinary skill in the art at the time of the invention the relevance of memory storage size. Kostoff also teaches selecting a portion of the word and phrase dictionary in col. 5 line 59 – col. 6 line 64. Kostoff uses an example of selecting the 60 most often repeated phrases. Kostoff notes that more or less than 60 most often repeated phrases may be selected at the discretion of the user.

In light of these teachings of Kostoff, one of ordinary skill in the art at the time of the invention would have truncated the dictionary of Kostoff at the user inputted number of most often repeated phrases in the event the dictionary had to reside within a limited memory storage. The teaching of Kostoff of possible memory storage constraints having an impact on a list size in col. 4 lines 44-45 would have motivated the person of ordinary skill in the art at the time of the invention to have made this modification. It would have been obvious to one of ordinary skill in the art at the time of the invention to have discarded the less frequent terms below the population threshold inputted by the user because they would not have been of further use in determining the themes of the text to prepare it for clustering with other documents. Only the top set of words and phrases determined by the user would have been used and therefore it would have been obvious to have only retained those words and phrases in the dictionary.

Kostoff does not explicitly teach the creation of the word and phrases lists in two separate passes through the document. One of ordinary skill in the art at the time of the invention would have known how to create the two lists in separate passes through the document. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use their skill in the art to have created each list as a result of each of two passes through the document. This would have been obvious and necessary in order to create the second list since the phrase selection would have been dependent on the contents of the first list.

**Regarding independent claim 11**, Kostoff teaches determining a frequency of each word in each document in fig. 2, table 1, col. 4 lines 50-68, and col. 6 line 65 – col. 7 line 11. Kostoff teaches creating a table of most frequently occurring words in the documents in fig. 2, table 1, col. 4 lines 50-68, and col. 6 line 65 – col. 7 line 11. Kostoff teaches determining a frequency of phrases in each document that could contain only words in a table in fig. 2, table 1, col. 4 lines 50-68, and col. 6 line 65 – col. 7 line 11. Kostoff teaches outputting the most frequently occurring words and most frequently occurring phrases as a dictionary in fig. 2 and col. 4 lines 64-68.

Kostoff does not specifically teach inputting a maximum dictionary size and limiting the dictionary to the inputted maximum dictionary size. However, Kostoff does acknowledge the importance and limitation of memory size for storing a list of trivial words in col. 4 lines 44-45. This list is different than the dictionary itself, however it teaches one of ordinary skill in the art at the time of the invention the relevance of memory storage size. Kostoff also teaches selecting a portion of the word and phrase dictionary in col. 5 line 59 – col. 6 line 64. Kostoff uses an

example of selecting the 60 most often repeated phrases. Kostoff notes that more or less than 60 most often repeated phrases may be selected at the discretion of the user.

In light of these teachings of Kostoff, one of ordinary skill in the art at the time of the invention would have truncated the dictionary of Kostoff at the user inputted number of most often repeated phrases in the event the dictionary had to reside within a limited memory storage. The teaching of Kostoff of possible memory storage constraints having an impact on a list size in col. 4 lines 44-45 would have motivated the person of ordinary skill in the art at the time of the invention to have made this modification. It would have been obvious to one of ordinary skill in the art at the time of the invention to have discarded the less frequent terms below the population threshold inputted by the user because they would not have been of further use in determining the themes of the text to prepare it for clustering with other documents. Only the top set of words and phrases determined by the user would have been used and therefore it would have been obvious to have only retained those words and phrases in the dictionary.

**5. Claims 2-5, 7-10, and 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kostoff et al. (hereafter referred to as Kostoff), US 5,440,481 patented 08/08/1995 as applied to claims 1, 6, and 11 above, and further in view of Kirsch et al. (hereafter referred to as Kirsch), US 6,070,158 filed 11/13/1997, Kobayashi, US 5,742,834 patented 04/21/1998 and Turney, US 6,470,307 B1 filed 06/23/1997.**

**Regarding dependent claim 2,** Kostoff teaches adding words to a dictionary table in fig. 2, table 1, col. 4 lines 50-68, and col. 6 line 65 – col. 7 line 11. Kostoff teaches determining the frequency of each word remaining in the table in fig. 2, table 1, col. 4 lines 50-68, and col. 6 line

65 – col. 7 line 11. Kostoff teaches removing words below a frequency level from the dictionary table in col. 6 lines 2-64.

Kostoff does not teach removing punctuation and case from the documents. Kostoff does not teach removing stop words from the document. Kostoff does not teach replacing words in the documents with synonyms. Kostoff does not teach removing duplicate words from the documents. Kirsch teaches removing punctuation and case from the documents in col. 12 lines 5-7. Kirsch teaches removing stop words from the document in col. 12 lines 13-15. Kobayashi teaches replacing words in the documents with synonyms in fig. 3, 34-35, and col. 1 line 54 – col. 2 line 13. Turney teaches removing duplicate words from the documents in col. 5 lines 37-38.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Kirsch, Kobayashi, and Turney into Kostoff to have created the claimed invention. It would have been obvious and desirable to have combined the punctuation and stop word removal technique of Kirsch into Kostoff so that the documents passes would have been more efficient. It would have been obvious and desirable to have combined the synonym word replacement of Kobayashi into Kostoff so that the word counts could have been uniform across all of the documents, which would have yielded the most accurate clustering results. It would have been obvious and desirable to have combined the duplicate word removal of Turney into Kostoff so that the lists would have been uniform among all the documents in the cluster. This would have yielded the most accurate clustering results among the documents.

**Regarding dependent claim 3**, Kostoff teaches inputting one or more stop words, synonyms and a frequency level in col. 4 lines 39-49, col. 5 lines 59-64, and col. 6 lines 60-64.



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**Regarding dependent claim 4**, Kostoff teaches adding words to a table in fig. 2, table 1, col. 4 lines 50-68, and col. 6 line 65 – col. 7 line 11. Kostoff teaches determining the frequency of each word remaining in the table in fig. 2, table 1, col. 4 lines 50-68, and col. 6 line 65 – col. 7 line 11. Kostoff teaches removing words below a frequency level from the table in col. 6 lines 2-64.

Kostoff does not teach removing punctuation and case from the documents. Kostoff does not teach removing stop words from the document. Kostoff does not teach replacing words in the documents with synonyms. Kostoff does not teach removing duplicate words from the documents. Kirsch teaches removing punctuation and case from the documents in col. 12 lines 5-7. Kirsch teaches removing stop words from the document in col. 12 lines 13-15. Kobayashi teaches replacing words in the documents with synonyms in fig. 3, 34-35, and col. 1 line 54 – col. 2 line 13. Turney teaches removing duplicate words from the documents in col. 5 lines 37-38.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Kirsch, Kobayashi, and Turney into Kostoff to have created the claimed invention. It would have been obvious and desirable to have combined the punctuation and stop word removal technique of Kirsch into Kostoff so that the documents passes would have been more efficient. It would have been obvious and desirable to have combined the synonym word replacement of Kobayashi into Kostoff so that the word counts could have been uniform across all of the documents, which would have yielded the most accurate clustering results. It would have been obvious and desirable to have combined the duplicate word removal

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of Turney into Kostoff so that the lists would have been uniform among all the documents in the cluster. This would have yielded the most accurate clustering results among the documents.

**Regarding dependent claim 5**, Kostoff teaches inputting one or more stop words, synonyms and a frequency level in col. 4 lines 39-49, col. 5 lines 59-64, and col. 6 lines 60-64.

**Regarding dependent claim 7**, Kostoff teaches adding words to a dictionary table in fig. 2, table 1, col. 4 lines 50-68, and col. 6 line 65 – col. 7 line 11. Kostoff teaches determining the frequency of each word remaining in the table in fig. 2, table 1, col. 4 lines 50-68, and col. 6 line 65 – col. 7 line 11. Kostoff teaches removing words below a frequency level from the dictionary table in col. 6 lines 2-64.

Kostoff does not teach removing punctuation and case from the documents. Kostoff does not teach removing stop words from the document. Kostoff does not teach replacing words in the documents with synonyms. Kostoff does not teach removing duplicate words from the documents. Kirsch teaches removing punctuation and case from the documents in col. 12 lines 5-7. Kirsch teaches removing stop words from the document in col. 12 lines 13-15. Kobayashi teaches replacing words in the documents with synonyms in fig. 3, 34-35, and col. 1 line 54 – col. 2 line 13. Turney teaches removing duplicate words from the documents in col. 5 lines 37-38.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Kirsch, Kobayashi, and Turney into Kostoff to have created the claimed invention. It would have been obvious and desirable to have combined the punctuation and stop word removal technique of Kirsch into Kostoff so that the documents passes would have been more efficient. It would have been obvious and desirable to have combined the

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synonym word replacement of Kobayashi into Kostoff so that the word counts could have been uniform across all of the documents, which would have yielded the most accurate clustering results. It would have been obvious and desirable to have combined the duplicate word removal of Turney into Kostoff so that the lists would have been uniform among all the documents in the cluster. This would have yielded the most accurate clustering results among the documents.

**Regarding dependent claim 8**, Kostoff teaches inputting one or more stop words, synonyms and a frequency level in col. 4 lines 39-49, col. 5 lines 59-64, and col. 6 lines 60-64.

**Regarding dependent claim 9**, Kostoff teaches adding words to a table in fig. 2, table 1, col. 4 lines 50-68, and col. 6 line 65 – col. 7 line 11. Kostoff teaches determining the frequency of each word remaining in the table in fig. 2, table 1, col. 4 lines 50-68, and col. 6 line 65 – col. 7 line 11. Kostoff teaches removing words below a frequency level from the table in col. 6 lines 2-64.

Kostoff does not teach removing punctuation and case from the documents. Kostoff does not teach removing stop words from the document. Kostoff does not teach replacing words in the documents with synonyms. Kostoff does not teach removing duplicate words from the documents. Kirsch teaches removing punctuation and case from the documents in col. 12 lines 5-7. Kirsch teaches removing stop words from the document in col. 12 lines 13-15. Kobayashi teaches replacing words in the documents with synonyms in fig. 3, 34-35, and col. 1 line 54 – col. 2 line 13. Turney teaches removing duplicate words from the documents in col. 5 lines 37-38.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Kirsch, Kobayashi, and Turney into Kostoff to have created the

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claimed invention. It would have been obvious and desirable to have combined the punctuation and stop word removal technique of Kirsch into Kostoff so that the documents passes would have been more efficient. It would have been obvious and desirable to have combined the synonym word replacement of Kobayashi into Kostoff so that the word counts could have been uniform across all of the documents, which would have yielded the most accurate clustering results. It would have been obvious and desirable to have combined the duplicate word removal of Turney into Kostoff so that the lists would have been uniform among all the documents in the cluster. This would have yielded the most accurate clustering results among the documents.

**Regarding dependent claim 10**, Kostoff teaches inputting one or more stop words, synonyms and a frequency level in col. 4 lines 39-49, col. 5 lines 59-64, and col. 6 lines 60-64.

**Regarding dependent claim 12**, Kostoff teaches adding words to a dictionary table in fig. 2, table 1, col. 4 lines 50-68, and col. 6 line 65 – col. 7 line 11. Kostoff teaches determining the frequency of each word remaining in the table in fig. 2, table 1, col. 4 lines 50-68, and col. 6 line 65 – col. 7 line 11. Kostoff teaches removing words below a frequency level from the dictionary table in col. 6 lines 2-64.

Kostoff does not teach removing punctuation and case from the documents. Kostoff does not teach removing stop words from the document. Kostoff does not teach replacing words in the documents with synonyms. Kostoff does not teach removing duplicate words from the documents. Kirsch teaches removing punctuation and case from the documents in col. 12 lines 5-7. Kirsch teaches removing stop words from the document in col. 12 lines 13-15. Kobayashi teaches replacing words in the documents with synonyms in fig. 3, 34-35, and col. 1 line 54 –

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col. 2 line 13. Turney teaches removing duplicate words from the documents in col. 5 lines 37-38.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Kirsch, Kobayashi, and Turney into Kostoff to have created the claimed invention. It would have been obvious and desirable to have combined the punctuation and stop word removal technique of Kirsch into Kostoff so that the documents passes would have been more efficient. It would have been obvious and desirable to have combined the synonym word replacement of Kobayashi into Kostoff so that the word counts could have been uniform across all of the documents, which would have yielded the most accurate clustering results. It would have been obvious and desirable to have combined the duplicate word removal of Turney into Kostoff so that the lists would have been uniform among all the documents in the cluster. This would have yielded the most accurate clustering results among the documents.

**Regarding dependent claim 13**, Kostoff teaches inputting one or more stop words, synonyms and a frequency level in col. 4 lines 39-49, col. 5 lines 59-64, and col. 6 lines 60-64.

**Regarding dependent claim 14**, Kostoff teaches adding words to a table in fig. 2, table 1, col. 4 lines 50-68, and col. 6 line 65 – col. 7 line 11. Kostoff teaches determining the frequency of each word remaining in the table in fig. 2, table 1, col. 4 lines 50-68, and col. 6 line 65 – col. 7 line 11. Kostoff teaches removing words below a frequency level from the table in col. 6 lines 2-64.

Kostoff does not teach removing punctuation and case from the documents. Kostoff does not teach removing stop words from the document. Kostoff does not teach replacing words in the documents with synonyms. Kostoff does not teach removing duplicate words from the

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documents. Kirsch teaches removing punctuation and case from the documents in col. 12 lines 5-7. Kirsch teaches removing stop words from the document in col. 12 lines 13-15. Kobayashi teaches replacing words in the documents with synonyms in fig. 3, 34-35, and col. 1 line 54 – col. 2 line 13. Turney teaches removing duplicate words from the documents in col. 5 lines 37-38.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Kirsch, Kobayashi, and Turney into Kostoff to have created the claimed invention. It would have been obvious and desirable to have combined the punctuation and stop word removal technique of Kirsch into Kostoff so that the documents passes would have been more efficient. It would have been obvious and desirable to have combined the synonym word replacement of Kobayashi into Kostoff so that the word counts could have been uniform across all of the documents, which would have yielded the most accurate clustering results. It would have been obvious and desirable to have combined the duplicate word removal of Turney into Kostoff so that the lists would have been uniform among all the documents in the cluster. This would have yielded the most accurate clustering results among the documents.

**Regarding dependent claim 15**, Kostoff teaches inputting stop words in col. 4 lines 39-49, col. 5 lines 59-64, and col. 6 lines 60-64.

**Regarding dependent claim 16**, Kostoff teaches inputting synonyms in col. 4 lines 39-49, col. 5 lines 59-64, and col. 6 lines 60-64.

**Regarding dependent claim 17**, Kostoff teaches inputting a frequency level in col. 4 lines 39-49, col. 5 lines 59-64, and col. 6 lines 60-64.

***Response to Arguments***

6. Applicant's arguments filed 4/12/2004 have been fully considered but they are not persuasive. Regarding Applicant's arguments in pages 7-9 that the combination of Kostoff et al. (hereafter referred to as Kostoff) and Kirsch et al. (hereafter referred to as Kirsch) fails to teach a inputting and implementing a maximum dictionary size, the Examiner believes the teachings of Kostoff would have lead one of ordinary skill at the time of the invention to have obviously modified Kostoff in a case where the dictionary of Kostoff had to reside within a constrained memory storage space. In response to the amended language of independent claims 1, 6, and 11 changing the word "hashtable" to "dictionary", the Examiner has dropped Kirsch in the rejection of independent claims 1, 6, and 11. The Examiner believes Kostoff teaches the creation of frequent word and phrase dictionaries from a text corpus.

***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Smith whose telephone number is 703-305-5931. The examiner can normally be reached on Mondays-Fridays 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H Feild can be reached on 703-305-9792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PJS  
June 16, 2004

  
JOSEPH FEILD  
SUPERVISORY PATENT EXAMINER